

REMARKS:

Claims 14 and 33 are herein amended. No claims are canceled or added in this amendment. Therefore, claims 1-12, 14 and 17-39 remain pending in the application.

Amendment to Claim 33

Claim 33 is herein amended to correct a typographical error.

Claim Objection

The Examiner objected to Claim 14 because of its dependence on a cancelled claim. Claim 14 has been amended to depend on a currently pending claim, i.e., claim 1.

Art-Based Rejections

Claim 32 was rejected under 35 U.S.C. Section 102 as being anticipated by Binder (7,200,152). Furthermore, Claims 1-12, 14, 17-31 and 33-39 were rejected under 35 U.S.C. Section 102 as being unpatentable based on various combinations of Binder (7,200,152), Rossetti et al. (6,420,963), Adams et al. (5,530,203), Freeman (5,461,195), Lemke (4,800,236), Lhota (6,399,883), Elms et al. (5,677,974), Batruni et al. (6,215,785), Aslami et al. (5,369,518), and Heavy et al. (4,468,571). Applicant respectfully traverses these rejections based on the following reasoning.

Claim 1 recites in pertinent part, “first end *connectors* that terminate *a first end* of the first section and a first end of the second section.” This feature is not suggested in any of the cited references. The Examiner argues that Binder teaches this feature at Col. 7, lines 35-47 and Figure 7. Applicant respectfully disagrees. The cited passage and Figure of Binder describe an embodiment where “the same wires are used for both communication and power.” (See Col. 7, lines 35-36). Thus, one of ordinary skill would not have been motivated to use a *plurality* of “end connectors” to “terminate” separate “section[s]” of a “cable”, as claimed. Certainly, Binder never suggests using more than one “end connector” to “terminate” “section[s]” of a “cable” as claimed. Indeed, at Col. 14, line 56 through Col. 15, line 16, Binder discloses using “an Ethernet-based LAN cable” for providing “a power signal and a full-duplex serial digital data signal” to a

“device.” One of ordinary skill would not have been motivated to “terminate” an “Ethernet-based LAN cable” with a *plurality* of “end connectors” as claimed.

Furthermore, claim 1 recites in pertinent part:

the first end connectors [are] configured to maintain adequate *physical and electrical contact* with a first node of said network over a range of operationally harsh environmental conditions.

This feature is not suggested in any of the cited references. The Examiner argues that Rossetti teaches this feature at Col. 5, line 43 to Col. 6, line 9 and in Figure 9. Applicant respectfully disagrees. The cited passage of Rossetti describes a configuration for a “plastic housing” for electronic circuitry. It has nothing to do with “a cable” or “end connectors” of a “cable” as claimed. In addition, the cited passage is concerned with “EMI shielding”, which has nothing to do with “maintain[ing] ... adequate electrical contact” as claimed. Thus, claim 1 and its dependents are patentably distinguished over the cited references at least for the reasons given above.

Claim 17 recites in pertinent part:

a cable, comprising: a first section including at least four *unshielded* twisted-wire pairs configured to carry data; a second section including at least a pair of insulated wires configured to carry power.

These features are not suggested in any of the cited references or any combination of the cited references. The Examiner relies on Adams to teach these features. While Adams discloses a “cable 100” having “power wires 101-104” and “wires ...[that] are twisted into thirteen pairs” (Col. 2, lines 32-51), the “twisted pairs” are “each [] wrapped in aluminum foil shielding tape 138.” Thus, the “twisted pairs” of Adams’ cable are “shielded”. They clearly are not “*unshielded* twisted pairs” as recited in claim 17.

Furthermore, claim 17 recites “a weather-resistant outer sheath surrounding at least the first section and the second section”. The Examiner relies on Rossetti Col. 5, line 43 through Col. 6, line 9 and Figure 6 to teach this feature. However, the cited passage and Figure have nothing to do a “cable” or a “sheath” for a “cable”. Instead the cited passage and Figure are concerned with providing “EMI shielding”, “weather protection”, and “weather and water sealing” for a “plastic housing” having a “groove[d]” “lid” and “bottom” using a “gasket”.

Thus, Claim 17 and its dependents are patentably distinguished over the cited references at least for the reasons given above.

Claims 23, 33 and 37 each recite features similar to the features quoted above in connection with claim 17. Thus, these claims and their dependents are patentably distinguished over the cited references based on similar reasoning.

Claim 32

Independent claim 32 includes means-plus-function (MPF) elements, which are governed by 35 U.S.C. Section 112, paragraph six. In particular, claim 32 recites “first means” and “second means” that are MPF elements. According to MPEP § 2181, “[t]he USPTO must apply 35 U.S.C. 112, sixth paragraph, in appropriate cases.”

Furthermore, the application of a prior art reference to a claimed MPF element “requires that the prior art element perform the identical function specified in the claim.” MPEP § 2182. If that test is met, the examiner “carries the initial burden of proof for showing that the prior art structure or step is the same as or equivalent to the structure, material, or acts described in the specification, which has been identified as corresponding to the claimed means or step plus function.” *Id.* With regard to the determination of equivalence, the MPEP § 2183 states:

If the examiner finds that a prior art element

- (A) performs the function specified in the claim,
- (B) is not excluded by any explicit definition provided in the specification for an equivalent, and
- (C) is an equivalent of the means- (or step-) plus-function limitation,

the examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent (emphasis added).

Applicant submits that the Examiner has not followed appropriate examination procedure with respect to the MPF elements of claim 32. Furthermore, Applicant submits that, under the proper procedures outlined in MPEP §§ 2181 *et seq.*, the pending claims are patentably distinct over the cited art.

Claim 32 recites “a first means for carrying data and power.” Structure corresponding to the recited function can be found in the specification at least at page 8, lines 4-33 and in Figures 3 and 4. The Examiner points to Binder Col. 7, line 35 to Col. 8, line 6 and Binder Figures 7-8 as allegedly showing the “first means”. However, the set of “wires” described by Binder in the cited passage is not equivalent to the claimed “first means” at least for the reason that “the *same wires* are used for both communication and power” (Col. 7, lines 35-36). In contrast, Applicant’s disclosed structure clearly uses separate sets of wires for carrying power and for carrying data.

Claim 32 also recites “a second means for sending and receiving data through the first means and for sending power to a node of a network through the first means.” Structure corresponding to the two recited functions can be found in the specification at least at page 8, lines 14-15 and lines 32 and in Figure 3. The Examiner points to Binder Col. 7, line 35 to Col. 8, line 6 and Binder Figures 7-8 as allegedly showing the “second means”. Applicant believes that the “wires” disclosed in the cited passage and Figures are terminated using only one connector. See, e.g., Col. 14, line 56 through Col. 15, line 16. Applicant’s disclosed structure for the “second means” clearly has separate connectors for data and for power. Binder suggests nothing that is equivalent to Applicant’s disclosed structure.

Thus, Claim 32 is believed to be patentably distinguished over the cited references at least for the reasons given above.

Dependent claim 14 recites, “the first end connectors contain a *protective contact dielectric gel* within contact areas of the first end connectors.” This feature is not suggested in any of the cited references. The Examiner points to the Abstract and Col. 12, lines 15-24 of Freeman as allegedly teaching this feature. While Freeman discloses “[a] cable having a thixotropic filling compound therein, the filling compound being a gel composition” (Abstract), Freeman never suggests “*end connectors*” [that] contain a “gel” within “contact areas” of the “end connectors”. In fact, the term “connector” never occurs in Freeman. Therefore, claim 14 is believed to be patentably distinguished over the cited references for this additional reason.

Dependent claim 22 recites in pertinent part, “The cable ... further compris[es] a removable strain cable.” This feature is not suggested in any of the cited references. The Examiner points to Lhota Col. 2, lines 45-64 as allegedly teaching this feature. However, the

cited passage describes a “system” that uses “PVC duct sections for supporting electrical wiring.” The cited passage discloses nothing regarding “a strain *cable*” or a “*removable* strain cable”. Thus, claim 22 is believed to be patentably distinguished over the cited references for this additional reason.

Dependent claim 38 recites that “the first and second *connectors* maintain adequate physical *and electrical* contact over a range of operationally harsh environmental conditions.” This feature is not suggested in any of the cited references. The Examiner points to Rossetti Col. 5, line 43 to Col. 6, line 9 and Rossetti Figure 6 as allegedly teaching this feature. However, the cited passage and Figure merely describe a “housing” (for electronic circuitry) and a means for achieving a “seal” between the “housing” and its “lid” using a “gasket”. It has nothing to do with “connectors” of a “cable” or with “connectors [that] maintain adequate physical and electrical contact” as claimed. Furthermore, it appears that the Examiner has confused the notion of “EMI shielding” with the notion of “electrical contact”. They are not the same. Therefore, claim 38 is believed to be patentably distinguished over the cited references for this additional reason.

Numerous other dependent claims are believed to be patentably distinct over the cited references. However, given the fact that all independent claims are believed to be in condition for allowance, it is not believed necessary to address the other dependent claims at this time.

CONCLUSION:

Applicants submit the application is in condition for allowance, and an early notice to that effect is requested.

Applicant has petitioned herewith for what is believed to be the appropriate extension of time. If any further extensions are necessary to prevent the above-referenced application from becoming abandoned, Applicant hereby petitions for such extension.

The Commissioner is authorized to charge any fees that may be required, or credit any overpayment, to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 501505/5957-03700/MKB.

Respectfully submitted,

Date: March 19, 2008

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